

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/485,421

DATE: 07/30/2001

TIME: 16:07:28

Input Set : A:\Upap0350.app  
Output Set: N:\CRF3\07302001\I485421.raw

3 <110> APPLICANT: Ayyavoo, Velpandi  
 4 Patel, Mamata  
 5 Kieber-Emmons, Thomas  
 6 Weiner, David B.  
 7 Mahalingam, Sundaramy  
 9 <120> TITLE OF INVENTION: Functional Fragments of HIV-1 VPR Protein and Methods  
 10 of Using the Same  
 12 <130> FILE REFERENCE: UPAP0350  
 14 <140> CURRENT APPLICATION NUMBER: 09/485,421  
 C--> 15 <141> CURRENT FILING DATE: 2000-10-05  
 17 <150> PRIOR APPLICATION NUMBER: 60/055,754  
 18 <151> PRIOR FILING DATE: 1997-08-14  
 20 <160> NUMBER OF SEQ ID NOS: 18  
 22 <170> SOFTWARE: PatentIn Ver. 2.1  
 24 <210> SEQ ID NO: 1  
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 26 <212> TYPE: PRT  
 27 <213> ORGANISM: Artificial Sequence  
 29 <220> FEATURE:  
 30 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence  
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 34 1 5 10 15  
 35 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ala Val Arg  
 36 20 25 30  
 37 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
 38 35 40 45  
 39 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
 40 50 55 60  
 41 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
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 55 Asp Glu Trp Val Val Glu Val Leu Glu Leu Lys Glu Ala Leu  
 56 20 25 30  
 57 Lys His Phe Asp Pro Arg Leu Leu Thr Ala Leu Gly Asn His Ile Tyr  
 58 35 40 45  
 59 Asn Arg His Gly Asp Thr Leu Glu Gly Ala Gly Glu Leu Ile Arg Ile

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71 50 55 60  
73 Leu Gln Arg Ala Leu Phe Met His Phe Arg Gly Gly Cys Ile His Ser  
74 65 70 75 80  
76 Arg Ile Gly Gln Pro Gly Gly Asn Pro Leu Ser Ala Ile Pro Pro  
77 85 90 95  
79 Ser Arg Ser Met Leu  
80 100  
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95 Thr Ile Glu Glu Ala Phe Asp Trp Leu Asp Arg Thr Val Glu Ala Ile  
96 20 25 30  
98 Asn Arg Glu Ala Val Asn His Leu Pro Arg Glu Leu Ile Phe Gln Val  
99 35 40 45  
101 Trp Gln Arg Ser Trp Arg Tyr Trp His Asp Glu Gln Gly Met Ser Arg  
102 50 55 60  
104 Ser Tyr Thr Lys Tyr Arg Tyr Leu Cys Leu Met Gln Lys Ala Val Phe  
105 65 70 75 80  
107 Met His Phe Lys Lys Gly Cys Thr Cys Arg Gly Glu Gly His Gly Pro  
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126 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ala Val Arg  
127 20 25 30  
129 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
130 35 40 45  
132 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
133 50 55 60  
135 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
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142 <210> SEQ ID NO: 5  
143 <211> LENGTH: 96

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155 20 25 30  
157 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
158 35 40 45  
160 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
161 50 55 60  
163 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
164 65 70 75 80  
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167 85 90 95  
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185 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
186 35 40 45  
188 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
189 50 55 60  
191 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
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210 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ser Val Arg  
211 20 25 30  
213 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
214 35 40 45

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216 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
217 50 55 60  
218 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
219 65 70 75 80  
220 Ile Gly Ile Ile Gln His Arg Arg Thr Arg Asn Gly Ala Ser Lys Ser  
221 85 90 95  
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229 Met Glu Gln Ala Pro Glu Asp Gln Gly Pro Gln Arg Glu Pro Tyr Asn  
230 1 5 10 15  
231 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Leu Val Arg  
232 20 25 30  
233 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
234 35 40 45  
235 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
236 50 55 60  
237 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
238 65 70 75 80  
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250 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ala Val Arg  
251 20 25 30  
252 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
253 35 40 45  
254 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Pro Leu Ile Arg Ile Leu  
255 50 55 60  
256 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
257 65 70 75 80  
258 Ile Gly Ile Ile Gln His Arg Arg Thr Arg Asn Gly Ala Ser Lys Ser  
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291 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence  
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294 Met Glu Gln Ala Pro Glu Asp Gln Gly Pro Gln Arg Glu Pro Tyr Asn  
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297 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ala Val Arg  
 298 20 25 30

300 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
 301 35 40 45

303 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ser Leu  
 304 50 55 60

306 Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
 307 65 70 75 80

309 Ile Gly Ile Ile Gln His Arg Arg Thr Arg Asn Gly Ala Ser Lys Ser  
 310 85 90 95

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322 Met Glu Gln Ala Pro Glu Asp Gln Gly Pro Gln Arg Glu Pro Tyr Asn  
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325 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ala Val Arg  
 326 20 25 30

328 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
 329 35 40 45

331 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
 332 50 55 60

334 Gln Gln Ser Leu Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg  
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337 Ile Gly Ile Ile Gln His Arg Arg Thr Arg Asn Gly Ala Ser Lys Ser  
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353 Asp Trp Thr Leu Glu Leu Leu Glu Leu Lys Asn Glu Ala Val Arg  
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356 His Phe Pro Arg Ile Trp Leu His Ser Leu Gly Gln His Ile Tyr Glu  
 357 35 40 45

359 Thr Tyr Gly Asp Thr Trp Thr Gly Val Glu Ala Leu Ile Arg Ile Leu  
 360 50 55 60

362 Gln Gln Leu Ser Phe Ile His Phe Arg Ile Gly Cys Arg His Ser Arg

**VERIFICATION SUMMARY**

PATENT APPLICATION: **US/09/485,421**

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Input Set : **A:\Upap0350.app**

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